

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
16 June 2005 (16.06.2005)

PCT

(10) International Publication Number
WO 2005/055435 A1

(51) International Patent Classification⁷: H03M 13/45

(21) International Application Number:
PCT/IB2004/004420

(22) International Filing Date: 3 December 2004 (03.12.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0328322.3 5 December 2003 (05.12.2003) GB

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

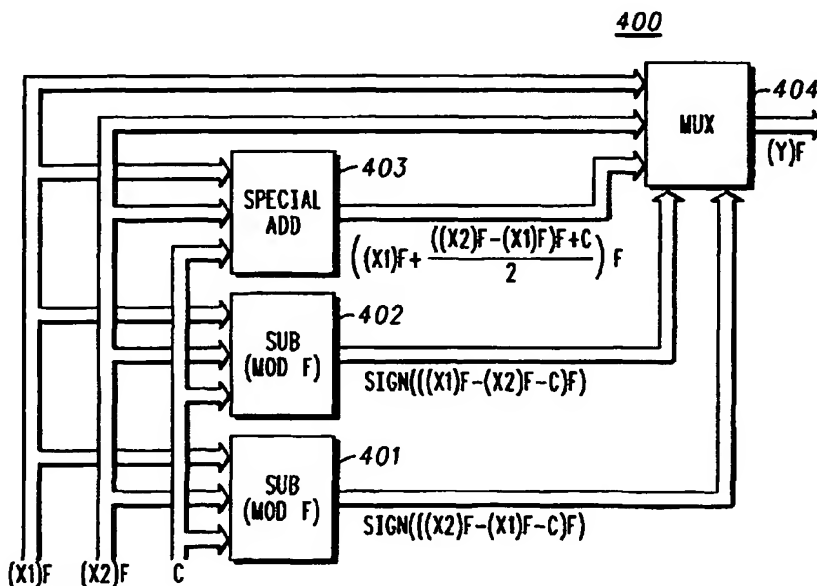
- with international search report
- with amended claims

Date of publication of the amended claims:

29 September 2005

[Continued on next page]

(54) Title: LINEAR APPROXIMATION OF THE MAX* OPERATION FOR LOG-MAP DECODING



(57) Abstract: A LOG-MAP decoder for a wireless communication device, which uses modulo arithmetic and comprises a calculator for calculating the modulo of a linear approximation of a MAX* function; and a selector for selecting a MAX* output value from the group $a(n) \bmod F$, $b(n) \bmod F$, and the calculated modulo based upon a determination as to whether a predetermined threshold value for $a(n) - b(n)$ has been met, where $a(n)$ is a first state metric, $b(n)$ is a second state metric, C is the predetermined threshold value and F is a value greater than $a(n) - b(n)$.



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